

**UNITED STATES DISTRICT COURT  
MIDDLE DISTRICT OF PENNSYLVANIA**

<b>DYVEX INDUSTRIES, INC.,</b>	:	
<b>Plaintiff,</b>	:	<b>Civil No. 12-CV-0979</b>
<b>v.</b>	:	<b>(JUDGE MANNION)</b>
<b>AGILEX FLAVORS &amp; FRAGRANCES, INC., et al.,</b>	:	
<b>Defendants</b>	:	

**MEMORANDUM**

This is a product liability case in which Dyvex alleges that Agilex's defective Perfectly Pomegranate Gras Oil ("PPG") polymer fragrance oil caused a fire while it was being processed and significantly destroyed its facility. Pending before the court are Agilex's motion to preclude Dyvex's expert witness, namely, Alex Profka, from offering any opinions regarding the origin of the fire at the Dyvex facility, Doc. 98, and Agilex's motion to preclude Dyvex from offering its expert witness, namely, Christian Rauwendaal, on the origin and cause of the fire, Doc. 104. Agilex contends that the opinions of Dyvex's experts regarding the origin and cause of the fire are unqualified and unreliable and, it seeks to preclude both experts from offering their opinions at trial. Agilex also argues that since Profka and Rauwendaal should be precluded from testifying and since their expert opinions cannot, as a matter of law, support Dyvex's claims on the requisite issue of causation, it is entitled to summary judgment. Based upon the court's review of the instant motion and related materials, the court will **DENY** Agilex's motions to preclude

Dyvex's expert witnesses from testifying at trial and, the court will **DENY** Agilex's motions seeking summary judgment in its favor as to Dyvex's remaining claims.

## **I. BACKGROUND<sup>1</sup>**

The remaining claims raised by Dyvex in its complaint, (Doc. [1](#)), against Agilex are for negligence, breach of warranty, and strict liability.<sup>2</sup> Dyvex essentially claims that Agilex's PPG fragrance oil was defective and created an unreasonable risk of fire, and that the June 3, 2010 fire at its facility was caused by Agilex's PPG that was being processed at the time in its Buss-Kneader machine. Dyvex also alleges that the PPG was unsafe and unsuitable for use in its Buss-Kneader machine, and that Agilex negligently failed to warn it of PPG's dangers, including its 93 degree flash point.

On April 3, 2017, Agilex filed both of its motions to completely preclude Profka and Rauwendaal, Dyvex's main expert witnesses regarding the origin and cause of the fire, from testifying, (Docs. 98 & 104), and simultaneously filed its briefs in support of its motions, (Docs. 99 & 105). After an extension

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<sup>1</sup>Since the court stated the background of this case, as well as many of the facts, in its February 12 and 28, 2018 Memoranda, it shall not fully repeat them herein. (Docs. 152 & 156). The court also uses the same abbreviations as it previously did and, the full names and titles of people involved in this case who were previously identified are not repeated.

<sup>2</sup>Because this is a case based upon diversity jurisdiction, [28 U.S.C. §1332](#), the court applies Pennsylvania law. See [Moore v. Kulicke & Soffa Industries, Inc.](#), 318 F.3d 561, 563 (3d Cir. 2003).

of time, Dyvex filed its briefs in opposition to both motions on April 21, 2017, (Docs. 116 & 117). Agilex filed its reply briefs on May 5, 2017, (Doc. 119), and on May 10, 2017, (Doc. 124). Dyvex was granted leave to file a sur-reply brief to Agilex's Doc. 98 motion and it did so on May 12, 2017, (Doc. 129). Both of Agilex's motions are fully briefed and both parties filed exhibits.

## **II. STANDARD OF REVIEW**

Agilex's instant motions seek, in part, to exclude evidence as irrelevant. It is axiomatic that "irrelevant evidence is not admissible." [Fed.R.Evid. 402](#). Evidence is relevant if "it has any tendency to make a fact more or less probable than it would be without the evidence" and if "the fact is of consequence in determining the action." [Fed.R.Evid. 401](#). Even if evidence is relevant, the court can exclude it if "its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence." [Fed.R.Evid. 403](#).

Agilex's motions also seek to exclude expert testimony from Profka and Rauwendaal at trial. The admissibility of expert testimony is governed by under [FRE 702](#), which requires an expert witness to have "specialized knowledge" regarding the area of testimony. The Third Circuit has explained, "[t]he basis of this specialized knowledge can be practical experience as well as academic training and credentials," and "[w]e have interpreted the

specialized knowledge requirement liberally.” [Betterbox Commc'ns Ltd. v. BB Techs., Inc.](#), 300 F.3d 325, 327-28 (3d Cir. 2002) (internal citations omitted).

The Federal Rules of Evidence embody a strong preference for admitting any evidence that may assist the trier of fact. *Id.* Moreover, Rule 702 “has a liberal policy of admissibility.” [Kannankeril v. Terminix Int'l, Inc.](#), 128 F.3d 802, 806 (3d Cir. 1997).

[Federal Rules of Evidence 702](#) provides that:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise, if:

- (a) the expert’s scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based upon sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods;
- (d) the expert has reliably applied the principles and methods reliably to the facts of the case.

[Fed.R.Evid. 703](#) provides:

An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

When faced with a proffer of expert testimony, the court must determine “whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.”

[Daubert, 509 U.S. at 592](#). See also. [In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 742 \(3d Cir. 1994\)](#) (“Rule 702’s ‘helpfulness’ standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility.”). The *Daubert* Court held that the Federal Rules of Evidence “assign to the trial judge the task of ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand.” *Id.* at 597. The test of reliability is “flexible,” and *Daubert*’s list of specific factors - testing, peer review, error rates, and “acceptability” in the relevant scientific community - neither necessarily nor exclusively applies to all experts or in every case. [Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 141 \(1999\)](#).

In performing its gatekeeping function to determine whether an expert’s report is relevant and reliable under *Daubert* and Rule 702, “the court is not to weigh the evidence relied upon or determine whether it agrees with the conclusions reached therein. . . . Determinations regarding the weight to be accorded, and the sufficiency of, the evidence relied upon by the proffered expert are within the sole province of the jury.” [Walker v. Gordon, 46 F. App’x 691, 695 \(3d Cir. 2002\)](#) (citing [Breidor v. Sears, Roebuck & Co., 722 F.2d 1134, 1138-39 \(3d Cir. 1983\)](#) (“Where there is a logical basis for an expert’s opinion testimony, the credibility and weight of that testimony is to be determined by the jury, not the trial judge.”)).

The Third Circuit stated in [Walker v. Gordon, 46 Fed.Appx. 691, 694 \(3d Cir. 2002\)](#), “[t]he District Court has broad discretion in determining the

admissibility of evidence, and ‘considerable leeway’ in determining the reliability of particular expert testimony under *Daubert*.” (citing [Kumho Tire, 526 U.S. at 152-53](#).” The *Walker* Court also stated that “*Daubert* requires that, when faced with a proffer of expert testimony, a trial judge determines ‘whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.’” *Id.* (citing [Daubert, 509 U.S. at 592, 113 S.Ct. 2786](#)). “These gatekeeping requirements have been extended to apply to all expert testimony.” *Id.* (citing [Kumho Tire, 526 U.S. at 147](#).).

Further, the Court in [Walker, 46 Fed.Appx. at 694](#), stated:

In accordance with *Daubert*, trial courts are required to apply a reliability analysis to an expert’s opinion; that opinion is “reliable” if it is based on the “methods and procedures of science” rather than on “subjective belief or unsupported speculation.” [In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 742 \(1994\)](#) (quoting [Daubert, 509 U.S. at 590](#)). In other words, the expert must have “good grounds” for his belief. *Id.* at 741-42 (explaining how Rule 702, which governs the use of expert testimony in the federal courts, embodies three distinct substantive restraints on the admission of expert testimony: qualifications, reliability and fit).

The Court in *Walker* provided guidance on the role of the trial court with respect to its gatekeeping requirements. The Court in [Walker, 46 Fed.Appx. at 695](#), explained:

In performing its gatekeeping function and, in particular, in deciding whether an expert’s report meets the reliability factor of a *Daubert* and Rule 702 analysis, the District Court is not to weigh the evidence relied upon or determine whether it agrees with the conclusions reached therein. To the contrary, the role of the District Court is simply to evaluate whether the *methodology*

utilized by the expert is reliable, i.e., whether, when correctly employed, that methodology leads to testimony helpful to the trier of fact. See [Daubert, 509 U.S. at 591-93](#) (noting that the testimony must “assist the trier of fact to understand the evidence or to determine a fact in issue” and that the trial court’s determination “entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue”). [FN7] Determinations regarding the weight to be accorded, and the sufficiency of, the evidence relied upon by the proffered expert, are within the sole province of the jury. Cf. [Breidor v. Sears, Roebuck and Co., 722 F.2d 1134, 1138-39](#) (3d Cir. 1983) (“Where there is a logical basis for an expert’s opinion testimony, the credibility and weight of that testimony is to be determined by the jury, not the trial judge.”).

An expert need only have “good” grounds for his opinion. The basis might be imperfect to such a degree that the court would find there is some different conclusion that has stronger evidentiary support, but that does not justify exclusion. [In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 744 \(3d Cir. 1994\)](#).

### **III. DISCUSSION**

By way of relevant background, Dyvex’s partial summary judgment motion was granted and the court basically precluded Agilex from asserting any of its defenses to Dyvex’s claims which rely upon industry safety rules and regulations found in OSHA and in various other safety provisions and building codes, such as ANSI and BOCA. (Docs. 156 & 157). As such, any of Agilex’s arguments with respect to its Doc. 98 and Doc. 104 motions seeking to preclude Profka and Rauwendaal from testifying as to their fire origin and

causation opinions which rely upon any of the stated safety rules, regulations and codes will not be considered.

**A. Doc. 98 Motion, Dyvex's Expert Origin Witness, Profka**

In its Doc. 98 motion, Agilex seeks to preclude Profka from testifying for Dyvex at trial pertaining to his opinions arguing that they are unreliable, speculative and unsupported by the evidence as to the origin of the fire and, that he cannot establish a causal nexus between the PPG and the fire. Agilex contends that Profka should be precluded from testifying and, that it should be granted summary judgment because Profka's expert reports and opinions cannot support Dyvex's claims with respect to the required elements Dyvex must prove.

Profka is a fire origin expert witness for Dyvex. Dyvex submitted an expert report, dated July 1, 2014, from Profka and a supplemental expert report from Profka, dated on July 1, 2015. (Doc. 99, Ex. C). Profka was also deposed in this case. (Doc. 99, Ex. D). On June 4, 2010, Profka investigated the fire at Dyvex on behalf of its insurance company, Nationwide. Agilex argues that Profka was not able to determine the origin and cause of the fire, and that his opinions are not based on sound scientific principles and generally accepted methodology in violation of FRE 702 and *Daubert*.

No doubt that if Dyvex has failed to present facts sufficient to establish the existence of an element essential to its case on which it would bear the burden of proof at trial, i.e., that Agilex's PPG caused the fire in its building,



then Agilex is entitled to summary judgment in its favor on Dyvex's two remaining claims. See *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-323, 106 S.Ct. 2548 (1986) ("Rule 56(c) mandates the entry of summary judgment, after adequate time for discovery and upon motion, against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial.").

Profka has investigated the origin and cause of fires since 1976, including many years as a PSP fire investigator, and he has authored over 4,000 reports during his career. He has also testified as an expert witness in both state and federal courts. In his initial report, Profka rendered an opinion regarding the origin of the fire and concluded as follows:

It is my opinion, within a reasonable degree of certainty, the fire began inside the [kneader] machine, and not on the exterior of the machine, where it was first observed by Mr. Frank Manchio, the employee, who was working at the time. He tried to extinguish the fire, using 2 fire extinguishers, to no avail.

Profka also opined in his July 2014 report as follows:

It was evident, with this [kneader] machine being opened, the area where the fire began was inside the machine. There were 2 spots across from each other. They measured approximately 6 to 8 inches in length and approximately 2 inches in height, and were black in color. This was not shown anywhere else in this area, and this was where the scented Perfectly Pomegranate was injected into the plastic going through the extruder machine.

As such, Profka found that the blackened spots were fire patterns which supported his opinion. Further, Profka concluded that the fire was the result

of “the low flashpoint of scented Perfectly Pomegranate being injected with the plastic product, inside the machine, a Buss Kneader.”

In his supplemental report, Profka stated as follows:

This supplemental report considers if there was any evidence of a fire below the Buss Kneader machine. The fire was seen by Mr. Frank Manchio, an employee, who discovered the fire and only observed fire on the machine, and nowhere below it. He was pretty concise as to the exact location of where the fire occurred, and the burn patterns in and on the top of the machine are consistent with a heavier burn/melt than underneath the machine, which appears to be fall down. There was no outside ignition source identified by this investigator, or by Trooper Russell Andress, only the inside of the Buss Kneader machine was considered to be the source of ignition.

Agilex contends that Profka failed to address the ignition source of the fire and, that he failed to perform “any testing or analysis to confirm that the presence of the black spots was evidence of the fire origin.” Agilex also points out that Profka incorrectly concluded that PPG was being injected into the kneader machine at the time of the fire since its evidence showed that an unknown fragrance oil was being processed when the fire started. It states that Profka neglects to acknowledge and to explain other evidence in the case which contradicts his opinions, such as Manchio’s statement that he first saw the fire outside of the kneader machine, that the oil leaked from the machine and then ignited, and that the fire grew rapidly, indicating that the fire would need a fuel source.

Agilex contends that Profka’s opinions are not consistent with generally accepted methods of fire investigation since Profka has never interviewed

Manchio and never read Manchio's deposition testimony. Rather, Agilex maintains that Profka's opinions in his reports were based on information he received from Dyvex's counsel and other people, including Strony, Depoti, and Trooper Andress, who were not present in Dyvex's building at the time of the fire. Agilex points to Profka's testimony in which he admitted that he "mainly [relied] on Trooper Andress [regarding his opinions] because he was the one [who] interviewed Mr. Manchio." Significantly, Agilex indicates that Profka admitted that he did not remember Andress telling him that he thought the fire started inside the kneader machine. Rather, Profka only recalled Andress told him that Manchio emptied two Dry-Chem fire extinguishers onto the machine and not anywhere else.

Agilex states that Andress actually interviewed Manchio, unlike Profka who did not, and according to Andress' report, Manchio indicated that he was pumping fragrance oil into the kneader machine when the flammable oil began to leak from a seam surrounding a heating chamber, and that the oil ignited. The report also indicated that Manchio used two Dry-Chem extinguishers on the fire, but that it spread very quickly. (Doc. 99, Ex. B). Andress concluded in his report that the fire was accidental, that "[f]ire damage surrounding [the kneader] machine clearly indicates that this is the point of origin", and that "[t]his fire began when flammable oil ignited on an

extrusion machine, which in turn ignited other combustible materials.”<sup>3</sup> When Profka was asked at his deposition whether he agreed with Andress’ opinion that the fire began when flammable oil ignited on the kneader machine and not inside the machine, Profka responded, “Well, on or in [the machine], it could be a typo. I don’t know. I know where I put the fire and that’s why I’m sticking with it. It’s to the engineer to determine if it was in or out [of the machine] and that’s his job, not mine.” Agilex states that although Profka admitted he relied upon Andress for the fact that the fire started inside the kneader machine, he was wrong about Andress’ opinion which was that the fire started on the machine. Profka explained his testimony that he believed Andress told him the fire started inside the machine by stating, “My best recollection, [Andress] says he has [the fire] on or in the machine. It could have been both words and I don’t independently recall that.” Agilex thus states that Profka admitted he relied on Andress to opine that the fire started **in the kneader machine**, but Andress’ opinion as to the origin of the fire was actually that oil ignited **on the kneader machine**.

Additionally, Agilex states that Profka admitted that he did not perform any testing at all in this case and testified that “[testing] would be left to the

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<sup>3</sup>The record actually indicates that Andress testified he was not sure if he or his partner Trooper Kaneski interviewed Manchio. The record also indicates that Manchio later testified in his deposition that flammable oil did not leak from the kneader machine and that he never experienced an oil leak from the machine.

engineers that were going to be called in. And that's why I told Mr. Strony and Mr. Depoti not to move anything until the engineer got there to determine exactly why this fire occurred in the machine." Agilex also contends that Profka's methodology he used to investigate the fire and to reach his opinion that the fire's origin was in the kneader machine was grossly deficient since he used his own "scientific method" which included only looking at "maybe [one-third to one-half] of [Dyvex's] building" as opposed to the entire fire scene. Profka also indicated that the building was "pretty dark" at the time he was in it, and that his entire investigation of the fire scene was less than four hours. Agilex maintains that Profka's so-called "my scientific method" that he utilized was not in conformance with any of the applicable scientific methods, including those provided in the National Fire Protection Association ("NFPA") and ASTM standards, and points out that Profka has only scanned the NFPA and never read it completely. Agilex indicates that Profka's method was contrary to NFPA 921's method of first properly establishing the origin of the fire prior to investigating the potential causes, since he merely relied upon Andress' report instead of independently assessing the origin of the fire himself as well as the validity of anyone else's opinions. Indeed, "[s]everal courts, including this one, have recognized that NFPA 921 offers a comprehensive and detailed treatment for fire investigation and have held its methodology is reliable for purposes of Rule 702." *Hoang v. Funai Corp., Inc.*, 652 F.Supp.2d 564, 568 (M.D.Pa. 2009) (citations omitted).

Agilex states that Profka's opinions and reports are flawed since he had a preconceived notion of what caused the Dyvex fire and since he presumed the fire started in the kneader machine in violation of NFPA 921, which provides that "[a]ll fires ... should be approached by the investigator without presumption", which renders his opinions as unreliable. Thus, Agilex concludes that Profka had "confirmation bias" since he failed to come up with any other hypotheses for potential origins of the fire and since he failed to rule out any other possible cause or origin for the fire. Rather, Agilex states that Profka "simply ruled that the fire originated inside the machine and that's where he left it, looking no further."

Agilex states that since Profka's methodology for determining the origin of the fire inside the kneader machine is not reliable and does not conform to generally accepted standards and methodology in his field of expertise, i.e., fire investigations, and since it is contrary to the physical and objective evidence he relied upon, i.e., the evidence indicated that the origin of the fire was outside the machine, his reports and opinions should be stricken as unreliable. Agilex states that since Profka's reports and testimony should be precluded at trial, Dyvex will not be able to prove that its PPG caused the fire and, that it is entitled to summary judgment on Dyvex's remaining claims. For support, Agilex cites to *State Farm Fire and Casualty Co. v. Holmes Products*, 165 Fed.Appx. 182, 187 (3d Cir. 2006) (Third Circuit held that "[u]nder Pennsylvania law, causation is an essential element of a strict products

liability claim, [ ], and [ ] plaintiff, has the burden of proving this essential element” to survive a motion for summary judgment.)(internal citations omitted), and Breidor, 722 F.2d at 1138 (“Where a fire investigator identifies the cause of fire in terms of probabilities (as opposed to mere possibilities) by eliminating all but one reasonable potential cause, such testimony is highly probative.”). In Holmes Products, 165 Fed.Appx. at 187, the Third Circuit also stated that “[w]ithout evidence sufficient to create a material issue of fact regarding causation, a jury could only speculate as to whether the [defendant’s product] was indeed the cause of the fire.”

Agilex essentially argues that the court should completely exclude Profka’s testimony since he was only able to state how the fire in Dyvex’s building started in terms of mere possibilities and since his opinion that the fire originated in the kneader machine was not sufficiently supported by evidence in the record. In fact, Agilex states that its expert witness, Long, noted in his report that there is no indication in “Profka’s report that he followed the scientific method to completion when conducting his investigation.” Agilex also faults Profka for failing to keep his field notes after he issued his initial report four years later and argues that it was prejudiced by his deliberate destruction of evidence in violation of NFPA. Agilex further argues that it was denied the chance to interview Manchio after the fire.

Dyvex states that Agilex does not accurately portray Andress’ findings and conclusions, particularly with respect to his conclusion that the fire

originated on the kneader machine and not in it. It states that Profka's methodology was based upon his vast experience in fire investigations and that his opinions are supported by the burn patterns found after the kneader machine was opened. Dyvex states that even though Andress concluded in his report that the "fire began when flammable oil ignited on an extrusion machine", he testified at his deposition that he had no idea what caused the ignition and that he did not know what the heat source was. Andress stated that he knew the kneader machine was where the fire began and that the heat source was "inside the machine or part of the machine", such as "a burn chamber or heat chamber." (Doc. 116-7). Thus, Dyvex states that Profka's opinion was not contrary to Andress' testimony and that Profka explained how he reached his opinion that the fire started in the kneader machine, which opinion was also based on the blackened areas found inside the machine when it was opened. In fact, Dyvex states that "Agilex's affirmative defense is that the fire did not start inside the kneader, yet its experts have never explained how a fire starting outside the kneader accounts for the localized burning inside corresponding to the location where the PPG, with a 93° F. flash point, was injected."

Dyvex also points out that Profka's investigation was limited to the origin of the fire and, thus states that Agilex's attempt to discredit him from failing to use the scientific method and test hypotheses is without merit. It further states that Profka's investigation was in compliance with NFPA and ASTM



standards and, that NFPA 921 is only a guide which allows the investigator to have flexibility and to rely on his/her own judgment to approach each investigation on a case-by-case basis. Dyvex also indicates that Profka's opinion as to the origin of the fire was almost the same as Long's opinion that "the area of origin was at the Buss kneader [machine]" and, Caulfield's opinion that "[t]he origin of the fire is clearly in the vicinity of the Buss-Kneader."

Moreover, since Manchio indicated that the fire was at the kneader machine and that he discharged the fire extinguishers at the machine, Profka's initial report was consistent with Manchio's statement. Profka opined as follows:

After examining the scene and conferring with Trooper Andress, this investigator is of the opinion that the fire began in the [kneader] machine that was the focus of the fire that was putting pomegranate scent into the product being produced. Burn pattern was traced from least to greatest damage, which is at the Buss kneader. This is in agreement with NFPA 921.

(Doc. 116, Ex. D).

In his supplemental report, Profka also considered a low level fire and the opinions of Agilex's experts that the fire many have started at or near floor level, and at his deposition he stated:

[that] when I looked at the fire scene, the fire that I was looking at was in the Buss kneader machine, like I previously stated. I checked the floor underneath it. I saw nothing that would relate to a fire beginning at floor level. And the fire patterns indicate to me that the fire was from the Buss kneader machine upward and outward causing the damage that I viewed.

(Doc. 116, Ex. E).

As such, Dyvex, (Doc. 116 at 17), explains as follows:

[Profka] followed the burn patterns from least to greatest damage. He observed fire damage that was greatest at the kneader and burn patterns that went upward and outward from the kneader, as well as comparatively less damage below the kneader that he attributed to burning materials dropping to the floor during the fire event. He later corroborated these burn patterns with the localized damage inside the kneader corresponding to where PPG was being injected. He concluded that the fire started inside the kneader rather than outside because Manchio's efforts to fight the fire with two NFPA-compliant handheld extinguishers were unsuccessful.

Additionally, Profka's origin opinions are consistent with the opinions of another one of Dyvex's experts, namely, Christian Rauwendaal, who opined in his report that:

Based on the observations of the operator and the forensic evidence we know that the fire occurred inside the barrel of the Buss [kneader machine]. There is no evidence to indicate that the fire started outside the Buss KCE. The fire ignited by a spark inside the Buss KCE.

(Doc. 116, Ex. M).

It is clear that Dyvex must have a cause and origin expert to provide an opinion to a reasonable degree to scientific certainty regarding the origin of the fire in its building as well as the cause of the fire. *See Holmes Products, supra*. Profka is one of Dyvex's experts regarding only the origin of the fire and it has other experts to establish its claim that Agilex's PPG caused the fire. Although Agilex argues that Profka's opinion that the fire started in the kneader machine is contrary to the evidence he relied upon to reach it,

including Andress' report and Manchio's statement to PSP, and that Profka did not perform any testing and used his own methodology, Profka was an extremely experienced fire investigator for many years with the PSP, testifying in many criminal cases as an expert witness for the Commonwealth and later, as an expert witness in state and federal court. Thus, the court will allow Profka to testify regarding all of his opinions, including the origin of the fire. Further, while Agilex did not interview Manchio after the fire, Manchio was later deposed and his initial statements were taken by the PSP and reflected in the PSP report. At trial, Agilex will be able to cross-examine Manchio regarding any inconsistencies it alleges exist between his statement to PSP and his deposition testimony.

In this case, as discussed in detail in the court's prior Memoranda, the court has found that Dyvex has presented sufficient evidence to create a material issue of fact regarding whether Agilex's PPG was being processed at the relevant time and whether it caused the fire at its building. As the court has previously found in this case, it will be for the jury to decide what fragrance oil was being processed by Dyvex at the time of the fire, where the fire started, and what caused the fire. Thus, the jury will decide the disputed fire origin and cause issues. Even though there is conflicting evidence regarding the stated issues, this is not grounds to exclude Profka's opinions. Agilex will be able to cross-examine Profka at trial regarding all of its above stated contentions challenging his opinions, as well as his failure to keep his

field notes and, the jury will ultimately decide Profka's credibility and the weight afforded to his testimony. See *Stecyk v. Bell Helicopter Textron, Inc.*, 295 F.3d 408, 415 (3d Cir. 2002) ("A party confronted with an adverse expert witness who has sufficient, though perhaps not overwhelming, facts and assumptions as the basis for his opinion can highlight those weaknesses through effective cross-examination.").

After examining the fire scene shortly after the fire, Profka, a very experienced fire investigator, has provided enough of a logical basis regarding his stated opinions as to the possible origin of the fire. See *Breidor*, 722 F.2d at 1138-1139. As the court held in *Hoang*, 652 F.Supp. 2d at 572, "[Profka's] inspection of the premises, origin determination, and analysis of the potential sources of the fire is relevant to the issues before the Court." Thus, Agilex's motion, (Doc. 98), insofar as it seeks to preclude Profka's opinions and to preclude him from testifying, will be **DENIED**. Also, since the court has found that Dyvex has presented sufficient evidence on the elements it must prove at trial with respect to its two remaining claims, Agilex's motion, insofar as it seeks summary judgment, will be **DENIED**.

**B. Doc. 104 Motion, Dyvex's Expert Causation Witness, Rauwendaal**

As stated, Dyvex has the burden to prove the origin and cause of the fire with respect to its two remaining claims against Agilex. Profka will be allowed to testify for Dyvex about the origin of the fire. Rauwendaal is Dyvex's fire cause and ignition source expert witness and, he issued an expert report

for Dyvex. (Doc. 105, Ex. C). Rauwendaal was also deposed in this case. (Doc. 105, Ex. D). Agilex seeks to completely preclude Rauwendaal from rendering his opinions at trial. Agilex also states that since Dyvex has failed to produce any other evidence or testimony, besides Rauwendaal's, as to the cause of the fire, it is entitled to summary judgment on Dyvex's remaining claims.

In his report, Rauwendaal opines as follows:

The fire at Dyvex was caused by Agilex ordering Dyvex to process a fragrance oil, PPG, with a low flash point using the Buss kneader compounding extruder (KCE). Agilex incorrectly reported PPG's flash point as 103° (without indicating whether this was Fahrenheit or Celsius) when, in fact, its flash point was 93°F (33.9°C).

The fire ignited by a spark inside the Buss KCE. The spark occurred by metal-to-metal contact between the barrel pins and the screw flights. The Buss KCE is susceptible to such metal-to-metal contact because of the complicated motion of the screw inside the barrel - the screw rotates at constant speed while reciprocating in axial direction. The spark ignited the volatiles that came off the PPG and filled the headspace in the barrel. I have considered and ruled out any suggestion that the flow of polymer pellets to the KCE was interrupted - there is no evidence that this condition occurred. Furthermore, this situation would not cause a fire because it would actually result in lower stock temperatures inside the Kneader. When the polymer flow stops the viscosity of the material in the machine will drop; this will reduce viscous dissipation and lead to lower stock temperatures.

I have also considered and ruled out any suggestion that the flow of oil to the KCE was interrupted; again there is no evidence that this happened. Since the PPG oil was responsible for the ignitable volatiles, an interruption of the oil flow would reduce the volatiles and, consequently, the risk of ignition. Further, without oil entering the Kneader the viscosity of the material in the machine will increase. This will increase viscous dissipation and will lead to

higher stock temperatures. The increase in stock temperatures is likely to be moderate (20- 40°F) due to the excellent heat transfer characteristics of Buss KCE. The molten plastic by itself has a flash point much too high to be ignited by a spark. This scenario, therefore, cannot explain the cause of the fire.

There is no evidence that any acts or omission of Dyvex caused or contributed to the fire. Dyvex operated this extruder for a decade without incident. The Buss KCE is a very good machine for the type of mixing done by Dyvex. As a result, the Buss KCE was a very reasonable choice to make by Dyvex. Internal sparks can occur in these machines because of the complicated motion of the screw inside the barrel combined with the intermeshing action of the barrel pins. This is not caused by poor maintenance; this problem is inherent to the design of the machine.

There is no evidence that this fire occurred because the machine ran out of polymer pellets or oil or because it locked up. There is also no evidence that the fire occurred because extrudate leaked out of the machine and oozed onto the outer hot surfaces. Finally, there is no evidence that the fire occurred because of operator error or poor operator training.

Thus, stated concisely, Rauwendaal opines that while Dyvex was processing PPG, the PPG was the first fuel ignited when the fire occurred and, that the ignition of the PPG was caused by a spark inside the kneader machine. He further opines that the spark occurred from metal-to-metal contact between the barrel pins and the screw flights inside the machine.

In its Doc. 104 motion, Agilex seeks to preclude Dyvex from offering the expert causation and fire origin opinions of Rauwendaal at trial arguing that he is unqualified to state that the fire began in the kneader machine, and that his opinions are speculative, unreliable and unsupported by the evidence as to the cause and origin of the fire. Agilex also states that Rauwendaal took no

steps to confirm what was actually being processed by Dyvex in the machine at the time of the fire, and that Rauwendaal cannot establish a causal nexus between its PPG and the fire. Agilex again argues that there is no physical evidence to show that Dyvex was processing PPG at the time of the fire. Agilex contends that Rauwendaal should be precluded from testifying and, that it should be granted summary judgment because his expert report and opinions cannot support Dyvex's claims with respect to the required causation element Dyvex has the burden to prove.

Rauwendaal opines that a spark inside the kneader machine was the ignition source for the fire. Agilex states that there is no testing or evidence which supports Rauwendaal's opinion and that he does not even know the type of internal materials in the machine. Agilex contends that "no evidence of metal-to-metal contact was identified in his report" and that "no testing or evidence that a spark can even occur from contact between the metals that are present inside the Buss-Kneader machine has been performed or revealed." It states that Rauwendaal's opinion is based entirely on speculation, that it fails to adhere to the scientific method and, that it is not supported by the evidence.

Agilex also contends that Rauwendaal is not qualified to render his opinions regarding the origin, i.e., the fire started in the kneader machine, and the cause of the fire, since he admitted that he was not a fire cause and origin expert, that he had no experience with fire investigations and, that he

had no training and no certification in fire cause and origin analysis. He also admitted that he was not aware of any such prior fires like the one that occurred in this case, i.e., inside kneader machine, and that the fire was a “unique occurrence.” Agilex states that Rauwendaal did not even perform any testing to confirm that the internal make-up of the kneader machine was capable of combustion, ignition, and sustaining a fire. Thus, since Rauwendaal does not know the industry standards for testing, Agilex contends that he is not qualified to opine that the standards were not met in this case. Therefore, Agilex states that Rauwendaal is not qualified to render any opinions as to the cause or ignition source of the fire.

Agilex also quotes excerpts from Rauwendaal’s deposition testimony arguing that his testimony undermines his above opinions, and that his unreliable testimony, if allowed at trial, would require the jury to guess as to the fire’s cause and origin. (Doc. 115 at 15-20). Agilex maintains that Rauwendaal’s opinions are not reliable since he did not follow NFPA 921 guidelines, he did not perform any testing, and his opinions were not derived from any testable hypothesis. Agilex also points out that Rauwendaal did not provide any factual predicate to support his opinion that the ignition source of the fire was metal-to-metal contact in the kneader machine. Thus, Agilex argues that Rauwendaal “offers no evidence, data, or test results to support his theory that a spark inside the Buss kneader was the ignition source for the fire or that a spark even occurred”, and that his opinion did not adhere to the



scientific method and was not supported by the evidence.

Additionally, Agilex states that no testing was possible to support Rauwendaal's finding that the flashpoint of the molten plastic was too high to cause a fire since Dyvex's counsel advised Long that "no polymeric material remained after the fire as the polymeric material was consumed in the fire." Thus, Agilex contends that there was no polymer sample available to test or to support Rauwendaal's theory. Agilex also points out that Rauwendaal contradicted his report in his deposition when he testified that "it wasn't impossible" that the polymer itself could be ignited.

Dyvex argues that Rauwendaal was well-qualified to render his opinion that a spark inside the kneader machine was the ignition source for the fire and that PPG was the first fuel ignited by the spark due to its low flash point. Rauwendaal is "an expert in plastic extrusion and compounding, and in polymeric materials." Dyvex states that "[h]e has designed components for the internal screws in extrusion machines, and for the dies at the discharge end, and his thesis for his Ph.D. in mechanical engineering was about backflow in screw extruders." Rauwendaal has also published over 200 scientific papers and 7 books, and he has lectured worldwide. (Doc. 117, Exs. B & H). Even though Rauwendaal is not a fire investigator, Dyvex states that Agilex's own experts, including Rust, Caulfield and James Rancourt, are not fire investigators, and are not fire cause and origin experts. Dyvex also states that its fire was indeed unique as Rauwendaal explained and simply because he

had no experience in a fire like the one in this case, neither Caulfield nor Rust ever investigated a kneader machine fire either. However, Dyvex points out that Rauwendaal has far more experience with kneader machines, i.e., kneader compounding extruders, than Rust and Rancourt. Dyvex indicates that Rauwendaal also has experience with fires originating in extruder machines when processing other materials, and thus was well-qualified to render his opinion that the kneader machine in this case had an internal spark that set off the ignition of an internal fire.

Dyvex states that “Rauwendaal reached his opinion about spark generation based on post-fire physical evidence, namely, deformed metal pins in a location within the kneader barrel that corresponds to where PPG was introduced and where blackening and charring was left after the fire.” It states that the internal components of the kneader machine are metal as Rauwendaal indicates since they have rusted after the incident and, that the deformed pins in the machine proves that they contacted each other. It states that Rauwendaal’s opinions are reliable and can be proven to a reasonable degree of scientific certainty. Dyvex explains that Rauwendaal’s opinions that the metal-to-metal contact between the pins “produced sparks and ignited a volatile mixture of air and PPG vapors” is supported by the evidence, namely, “the localized charring and oxidation where the PPG was injected to be compounded with molten polymer.” It states that there is no dispute that localized charring of partially processed material was found inside the barrel

of the kneader machine. Dyvex contends that there was ample evidence to support Rauwendaal's conclusion that there was localized charring inside the barrel of the machine since the fire originated there, and that he was well-qualified to render his conclusion. Dyvex points out that it is undisputed that there was evidence of burning and charring inside the kneader barrel. Rauwendaal also found that the localized burning which occurred inside the kneader machine "cannot be explained by any outside ignition scenario." Dyvex also points out that Rauwendaal is well-qualified to render his opinion that the wear of one of the barrel pins was caused by metal-to-metal contact since he has published papers and chapters, as well as written books, namely, "Polymer Extrusion" and "Troubleshooting Extrusion Problems", discussing the incidence of metal-to-metal contact inside kneader machines.

In short, Dyvex contends that Rauwendaal was qualified as an expert regarding kneader machines to explain what caused the pins in Dyvex's kneader machine to be worn and deformed, and to render his conclusion that "when the extruder is partially filled, as in the Buss kneader, metal-to-metal contact can certainly create a spark." Dyvex also shows how Rauwendaal was qualified to explain why the fire progressed quickly in this case and why the fire did not go out by itself based on the fact that there was "a continuing supply of oil and a continuing supply of oxygen by the air being pulled into the machine" and that "as long as the oil [was] being pumped, there was no way for that fire to go out by itself."

Further, Dyvex indicates that Rauwendaal ruled out other possible causes of the fire, including ruling out the ignition of spilled or leaked oil from the machine since the oil would remain at room temperature if it leaked, as well as ruling out a spark outside of the machine. Additionally, Rauwendaal explained that an ignition of the polymer alone did not cause the fire since the PPG supplied the “ignitable volatiles” and since the molten plastic “has a flash point much too high to be ignited by a spark.” Finally, he ruled out operator error as the cause and found no evidence that Dyvex was using the kneader machine beyond its limits. (Doc. 117 at 12-13).

Additionally, Dyvex states that Rauwendaal also relied upon the hard drive in the computer for the kneader machine to support his initial conclusion as to the cause of the fire:

The fire, to a reasonable degree of certainty, started by a spark inside the Buss KCE resulting from metal-to-metal contact between the screw and the barrel. The spark served as the ignition source for the flammable mixture of air and gases resulting from Agilex’s supply of Perfectly Pomegranate with a flash point of 93° F.

(Doc. 117, Ex. A).

After Dyvex had an IT consultant obtain more information from the hard drive, Rauwendaal analyzed it and then concluded as follows:

The changes observed in the process data are consistent with the metal-to-metal contact hypothesis. This could have happened by contact between the screw and barrel pins. Such metal-to-metal contact will increase torque and motor power. It will also result in changes in barrel temperature because more drive power is dissipated in the machine and absorbed by the polymer and oil.

(Doc. 117, Ex. B).

Rauwendaal then concluded that “when the extruder is partially filled, as in the Buss kneader, metal-to-metal contact can certainly create a spark.” As such, Dyvex argues that Rauwendaal is qualified, that his opinions are based on the evidence as well as scientific methods, that his testimony fits, and that his testimony is relevant and material to the issues it must prove with respect to its claims. Thus, Dyvex states that Rauwendaal can sufficiently establish requisite elements of its claims, including that a causal connection existed between Agilex’s PPG and the fire. Therefore, Dyvex maintains that Rauwendaal’s opinions regarding the fire’s origin and cause, i.e., Agilex’s PPG, are to a reasonable degree of scientific certainty.

Initially, insofar as Agilex challenges Rauwendaal’s opinions based on its contention that there is no evidence that PPG was being processed by Dyvex in the kneader machine at the time of the fire, the court will not revisit its finding that the jury will decide this issue. Agilex also challenges Rauwendaal’s contention in his report that Manchio “observed the fire starting in the Buss kneader compounding extruder”, based on the PSP report which indicated that while Manchio was pumping oil into the kneader machine, the flammable oil began to leak from a seam. However, as discussed, Manchio’s later deposition testimony was that he never observed oil leaking from a seam of the kneader machine, and the jury will decide the credibility of Manchio at

trial. As the Third Circuit stated in [Walker, 46 Fed.Appx. at 695](#), “[a]n expert is ... permitted to base his opinion on a particular version of disputed facts and the weight to be accorded to that opinion is for the jury. It is also ... a proper subject for cross-examination.” (citing [Stecyk v. Bell Helicopter Textron, Inc., 295 F.3d 408, 414 \(3d Cir. 2002\)](#)).

Agilex also insists that there is no evidence that metal-to-metal contact occurred inside the kneader machine and, states that Rauwendaal “offered no hypothesized explanation of how or why the sparks would have failed to ignite a fire previously inside a machine in the polymer processing industry.” Even though the basis for Rauwendaal’s opinions might be imperfect to such a degree that the court would find there is some different conclusion that has stronger evidentiary support, that does not justify exclusion of them. [In re Paoli R.R. Yard PCB Litigation, 35 F.3d 717, 744 \(3d Cir. 1994\)](#).

In liberally considering Rauwendaal’s qualifications, as the Third Circuit requires, see [Calhoun v. Yamaha Motor Corp., U.S.A., 350 F.3d 316, 321 \(3d Cir. 2003\)](#), Rauwendaal has the required specialized expertise for his opinions based on his knowledge, skill and experience. The court finds that Rauwendaal is very qualified regarding kneader machines and that his opinions are supported by the physical evidence, including evidence of the ignition source which was the deformed pins and the localized blackening and charring found in the kneader machine, as well as by scientific principles.

Rauwendaal's methodology and opinions are also reliable, and he establishes a causal connection between Agilex's PPG and the fire at the Dyvex facility. Agilex will be able to challenge Rauwendaal's opinions at trial, as well as the evidence upon which he relied, by presenting its evidence that PPG was not being processed at the time of the fire and that the flash point of the PPG was not 93° F., and by presenting its experts who opine that a fire cannot start inside a kneader machine. The existence of conflicting evidence is not a basis to exclude an expert's testimony. [ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254, 290 \(3d Cir. 2012\)](#). The respective credibility of Dyvex's expert witnesses and Agilex's expert witnesses is a question for the jury to decide. Id. (citation omitted).

Thus, the court will **DENY** Agilex's motion, (Doc. 104), insofar as it seeks to preclude Rauwendaal from giving his opinions as to the origin and cause of the fire and, it will **DENY** Agilex's motion to the extent that it seeks summary judgment.

#### **IV. CONCLUSION**

Accordingly, the court will **DENY** Agilex's motion to preclude Profka from rendering his opinions at trial, (**Doc. 98**), and the court will **DENY** Agilex's motion to the extent that it seeks summary judgment. The court will also **DENY** Agilex's motion, (**Doc. 104**), to preclude Rauwendaal from giving his

opinions at trial and, the court will **DENY** Agilex's motion to the extent that it seeks summary judgment.

s/ *Malachy E. Mannion*  
**MALACHY E. MANNION**  
United States District Judge

**DATE: March 22, 2018**

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